



TOWN OF OCCOQUAN

Town Hall, 314 Mill Street, Occoquan, VA 22125
www.occoquanva.gov | info@occoquanva.gov | (703) 491-1918

PLANNING COMMISSION MEETING

Tuesday, February 10, 2015

7:00 PM

TOWN HALL - 314 MILL STREET

There will be a Planning Commission Meeting to
Discuss the Following:

- Approval of January 13, 2015 Meeting Minutes
- Site Plan Review, 458 Mill Street (River Park – Restroom/Storage Facility)
- Comprehensive Plan Update
- Strategic Plan Discussion
- Planning Commission Meeting Schedule

Joe McGuire

Town of Occoquan Councilmember
Planning Commission Chair



MAYOR
ELIZABETH A.C. QUIST

TOWN OF OCCOQUAN

CIRCA 1734 INCORPORATED 1874
314 MILL STREET, P.O. BOX 195
OCCOQUAN, VIRGINIA 22125
703-491-1918 FAX 703-491-4962

TOWN COUNCIL
PATRICK A. SIVIGNY, VICE MAYOR
TYLER C. BROWN
J. MATTHEW DAWSON
JIM DRAKES
JOE MCGUIRE

TOWN MANAGER
KIRSTYN BARR JOVANOVIH

**CHIEF OF POLICE &
TOWN SERGEANT**
SHELDON E. LEVI

TOWN CLERK
GREG HOLCOMB

TREASURER
ABIGAIL BREEDING, C.P.A.

STAFF REPORT River Mill Park Site Plan

Applicant: Town of Occoquan

Date: February 4, 2015

PART I

A. EXECUTIVE SUMMARY

The applicant proposes to construct a restroom/storage facility adjacent to and for the use of patrons of the River Mill Park. This staff report evaluates the proposed application as it pertains to conformity with Town ordinances.

B. DESCRIPTION OF PETITION

The applicant requests approval of the site plan for the River Park Restroom and Maintenance Facility, dated November, 2014, last signed February 2, 2015.

C. APPLICABLE REGULATIONS

1. Chapter 46 – Site Plans
2. Chapter 66 – Zoning

PART II

A. ANALYSIS OF EXISTING CONDITIONS

1. Site Area: ±0.88 acres
2. Use: Public Restroom and Storage Facility

3. Zone: B-1.
4. Location: The referenced property is located at 460 Mill Street, at the terminus of the public road (PWC GPIN 8393-65-2114).
5. Buildings/Structures: Single two-story structure – 980 square feet, gross floor area.
6. Access: Access is from the Mill Street cul-de-sac.
7. Chesapeake Bay Preservation: This site disturbs less than 2,500 square feet and therefore is exempt from the Chesapeake Bay Preservation requirements.
8. Stormwater Management and Virginia Stormwater Management Program (VSMP): This site disturbs less than 2,500 square feet and therefore is exempt from the VSMP requirements for water quality and quantity.

B. ANALYSIS OF PROPOSED PLAN

The Town of Occoquan (Town) will take maintenance responsibility of a proposed park on the site of the former Fairfax County Water Authority water storage tanks, adjacent to the Occoquan River at the cul de sac for Mill Street. As part of that maintenance responsibility, the Town will require storage options in close proximity to the park. In addition, the Town proposes a stand-alone public restroom at the western edge of Town.

No additional parking or vehicular access is proposed with this site plan, given its proximity to Mill Street. There are, however, 10 parking spaces around the Mill Street cul de sac which can be used for this facility.

No landscaping has been proposed with this site plan, nor is any required.

As noted above, the small area of disturbance (under 2,500 square feet) exempts this project from both Chesapeake Bay Preservation and VSMP requirements.

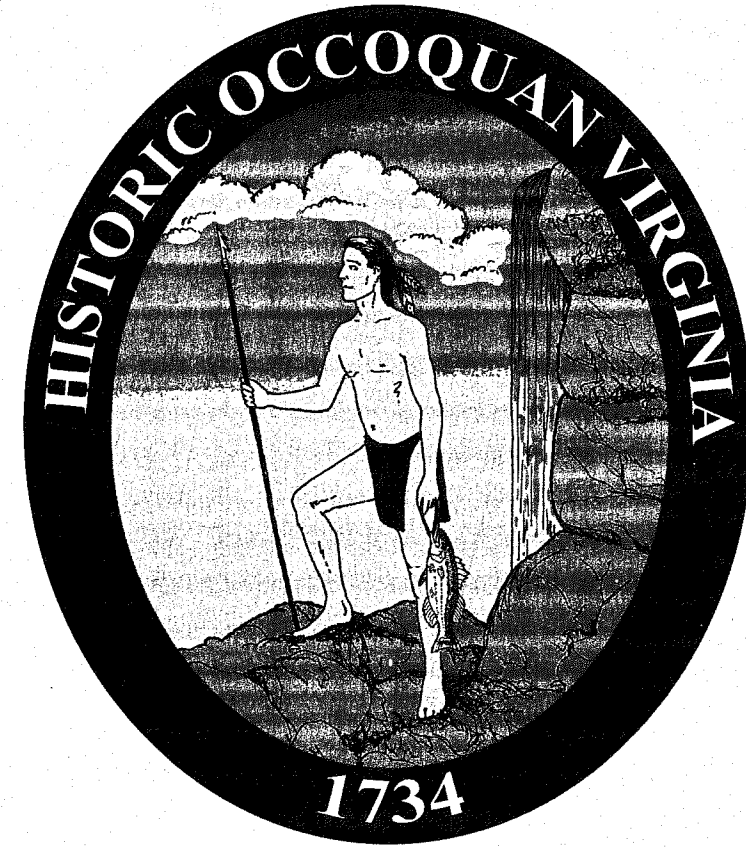
PART III

STAFF CONCLUSIONS

The proposed site plan, having been duly reviewed by Town Staff, has been deemed consistent with the applicable provisions of the Town Code. It is therefore Staff's recommendation to grant **approval** to the above referenced plan, subject to submission of an appropriate lighting plan and approvals from the Virginia Department of Transportation (VDOT), the Prince William County Service Authority (PWCSA), and the Fairfax County Water Authority (FCWA).

PREPARED BY: Bruce A. Reese, PE, LS - Town Engineer, February 4, 2015





SITE PLAN

FOR

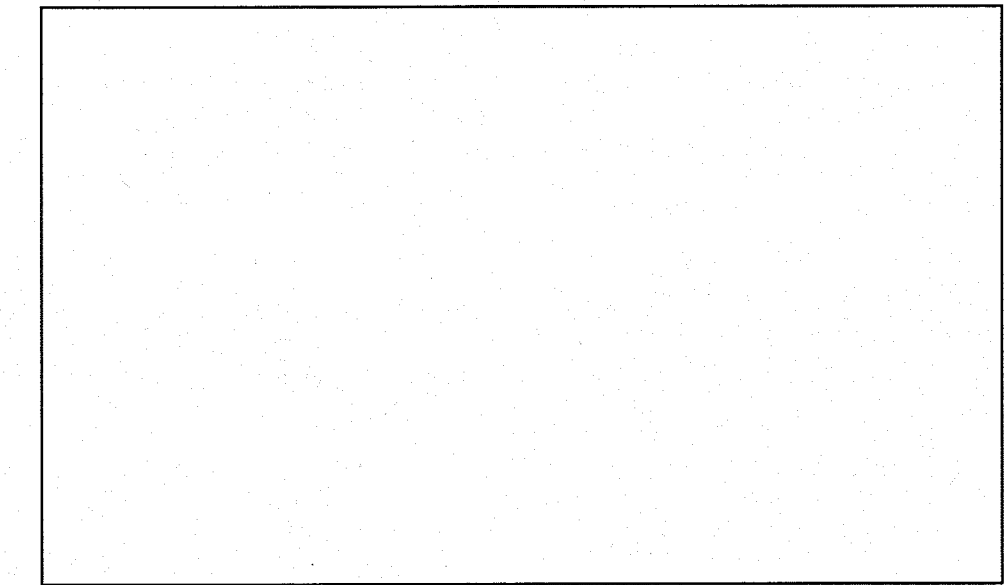
RIVER PARK

RESTROOM & MAINTENANCE FACILITY

458 MILL STREET

TOWN OF OCCOQUAN, VIRGINIA

TOWN APPROVAL BLOCK



ENGINEER:

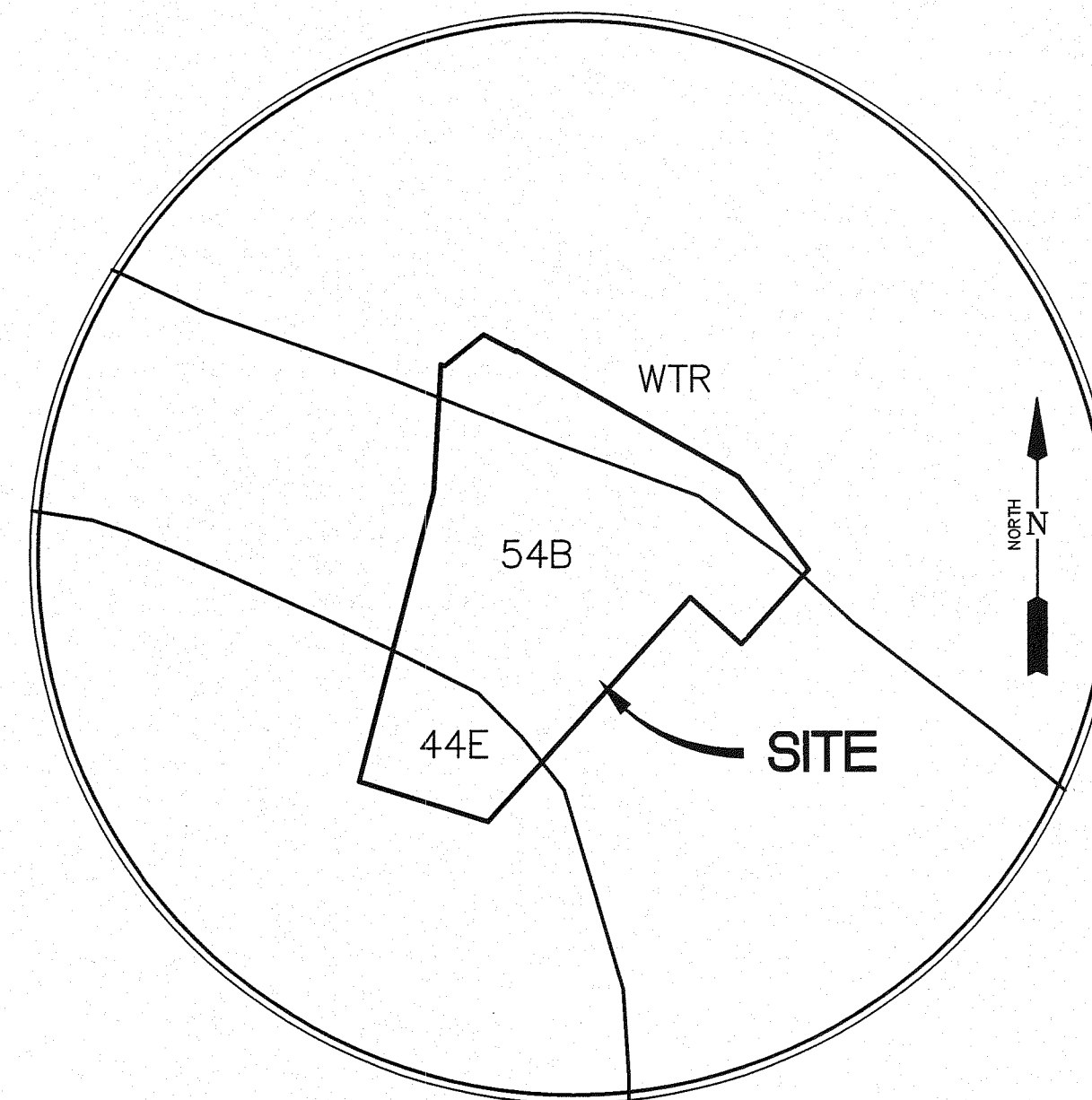
THE ENGINEERING GROUPE, INC.
13580 GROUPE DRIVE, SUITE 301
WOODBIDGE, VIRGINIA 22192
(703) 670-0985 (TEL)
(703) 670-7769 (FAX)
CONTACT: MR. MATT WILLIAMS

ARCHITECT:

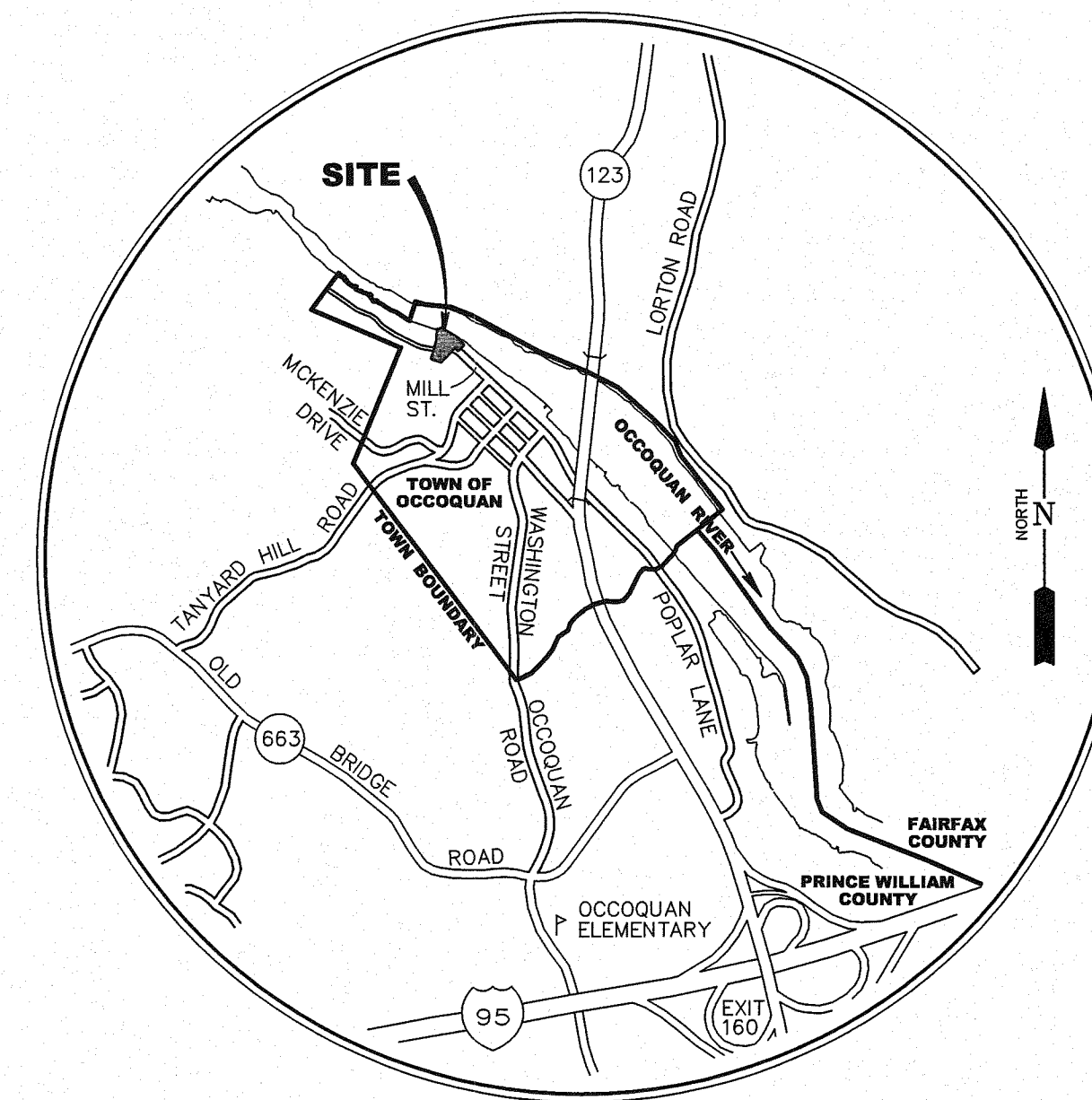
MGMA
131 GREAT FALLS ST.
FALLS CHURCH, VA 22042
(703) 6538-7100 (TEL)
CONTACT: MR. MICHAEL GICK, AIA, MRTPI, LEED AP

OWNER/APPLICANT:

TOWN OF OCCOQUAN
314 MILL STREET
PO BOX 195
OCCOQUAN, VA 22125
(703) 491-1918
CONTACT: MRS. KIRSTYN JOVANOVICH, TOWN MANAGER



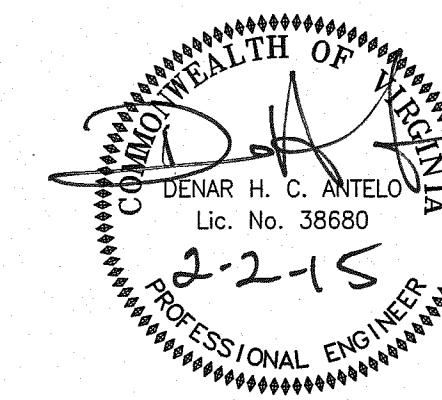
SOILS MAP
1" = 1000'



VICINITY MAP
1" = 1500'

SITE PLAN SHEET INDEX

SHEET NO.	TITLE
01	COVER SHEET
02	NOTES, DETAILS & TYPICAL SECTIONS
03	EXISTING CONDITIONS & UTILITIES PLAN
04	LANDSCAPE ARCHITECTURE PLAN
05	GRADING PLAN
06	PROFILES
07-08	PWCSA SHEETS
09	EROSION & SEDIMENT CONTROL PLAN - PHASE I & II, NOTES & DETAILS
10	LIGHTING PLAN



ENGINEER'S CERTIFICATE

I, DENAR H. C. ANTELO, A PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF VIRGINIA, DO HEREBY CERTIFY THAT, TO THE BEST OF MY KNOWLEDGE, THIS PLAN CONFORMS TO ALL APPLICABLE STATE AND LOCAL STANDARDS.

2-2-15
DATE

DENAR H. C. ANTELO, PE

SELECTED SOILS DATA FROM SOIL SURVEY - PRINCE WILLIAM COUNTY, VIRGINIA

SOILS SYMBOL	SOILS NAME	ERODIBILITY	SLOPE RANGE
44 E	Stumptown/very flaggy loam	Moderate	25% to 50%
54 B	Urban land-Udorthents Complex	Slight	0% to 7%

PWCSA S/A PLAN #
15-OCC01-R00

DATE PREPARED: NOVEMBER 2014
PREPARED BY: MAW

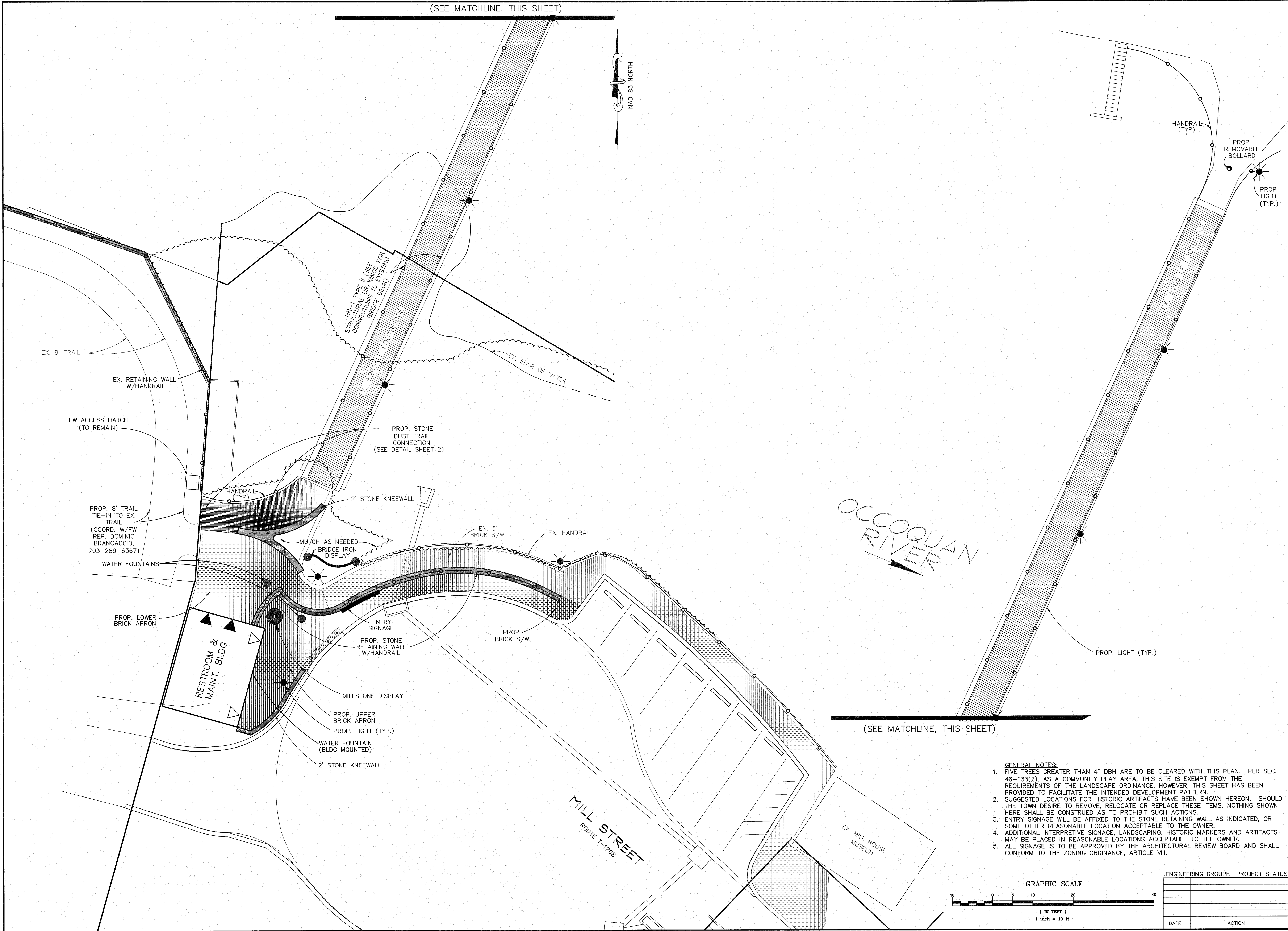
The Engineering Groupe
Inc.
Engineers | Surveyors | Planners
www.enggroupe.com
South Office: 4936 Southpoint Parkway, Fredericksburg, VA 22407, PH 540.710.5987, FX 540.710.5988
Central Office: 13580 Groupe Drive, Suite 301, Woodbridge, VA 22192, PH 703.670.0985, FX 703.670.7769
Metro Office: 1483 Chain Bridge Road, Suite 300, McLean, VA 22101-5703, PH 703.670.0985, FX 703.670.7769

SP-280 SHEET 01 OF 10

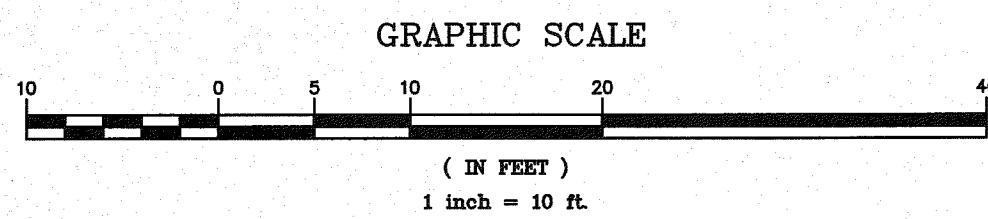
G:\PROJECT\OCCOQUAN, TOWN OF\PROJECTS\River Park\ENG\DWG\00-K0001.dwg, COVER SHEET, 2/2/2015 10:47:52 AM, mattheww, 1:1

Subdivision/Site Plan Name: RIVER PARK

Town File Number:



- GENERAL NOTES:
1. FIVE TREES GREATER THAN 4" DBH ARE TO BE CLEARED WITH THIS PLAN. PER SEC. 46-133(2), AS A COMMUNITY PLAY AREA, THIS SITE IS EXEMPT FROM THE REQUIREMENTS OF THE LANDSCAPE ORDINANCE, HOWEVER, THIS SHEET HAS BEEN PROVIDED TO FACILITATE THE INTENDED DEVELOPMENT PATTERN.
 2. SUGGESTED LOCATIONS FOR HISTORIC ARTIFACTS HAVE BEEN SHOWN HEREON. SHOULD THE TOWN DESIRE TO REMOVE, RELOCATE OR REPLACE THESE ITEMS, NOTHING SHOWN HERE SHALL BE CONSTRUED AS TO PROHIBIT SUCH ACTIONS.
 3. ENTRY SIGNAGE WILL BE AFFIXED TO THE STONE RETAINING WALL AS INDICATED, OR SOME OTHER REASONABLE LOCATION ACCEPTABLE TO THE OWNER.
 4. ADDITIONAL INTERPRETIVE SIGNAGE, LANDSCAPING, HISTORIC MARKERS AND ARTIFACTS MAY BE PLACED IN REASONABLE LOCATIONS ACCEPTABLE TO THE OWNER.
 5. ALL SIGNAGE IS TO BE APPROVED BY THE ARCHITECTURAL REVIEW BOARD AND SHALL CONFORM TO THE ZONING ORDINANCE, ARTICLE VIII.



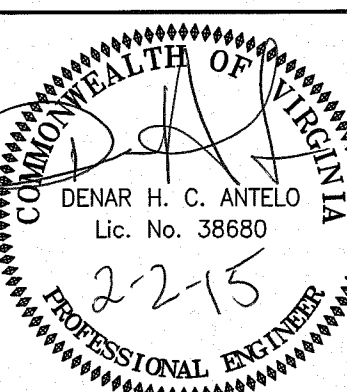
ENGINEERING GROUPE PROJECT STATUS	
DATE	ACTION

LANDSCAPE ARCHITECTURE PLAN

RIVER PARK

RESTROOM & MAINTENANCE FACILITY

TOWN OF OCCOQUAN, VIRGINIA



DATE:	NOVEMBER 2014
SCALE:	1"=10'
DESIGNER:	MAW
DRAFTSMAN:	D.M.P.
FILE NO.	SP-280
SHEET	04 OF 10

NO.	DATE	COUNTY	REVISIONS

The Engineering Groupe Inc.

Engineers | Surveyors | Planners

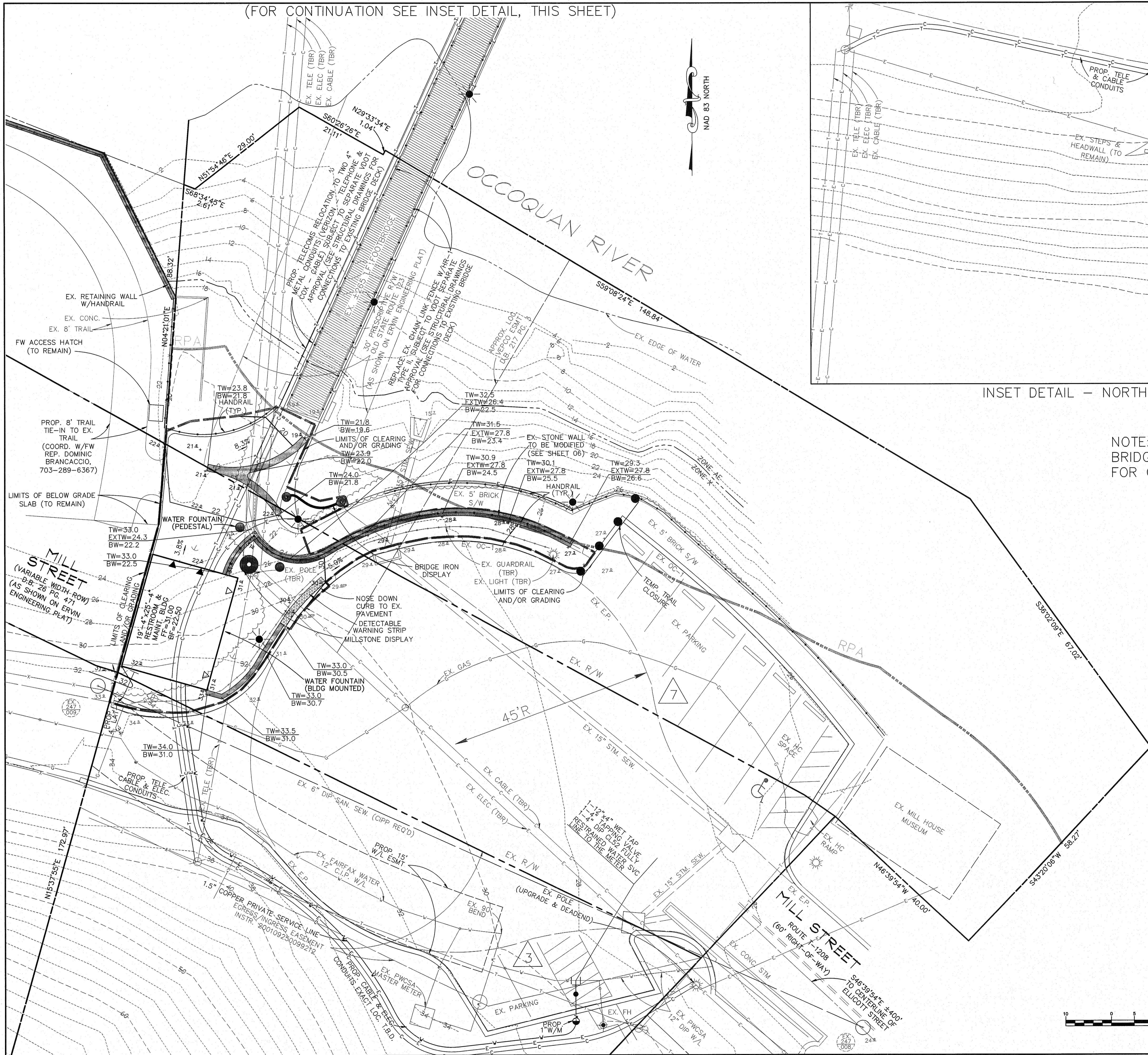
www.theengineeringgroupe.com

South Office
4936 Southpoint Parkway
Fredericksburg, VA 22407
PH 540.710.5987 FX 540.710.5988

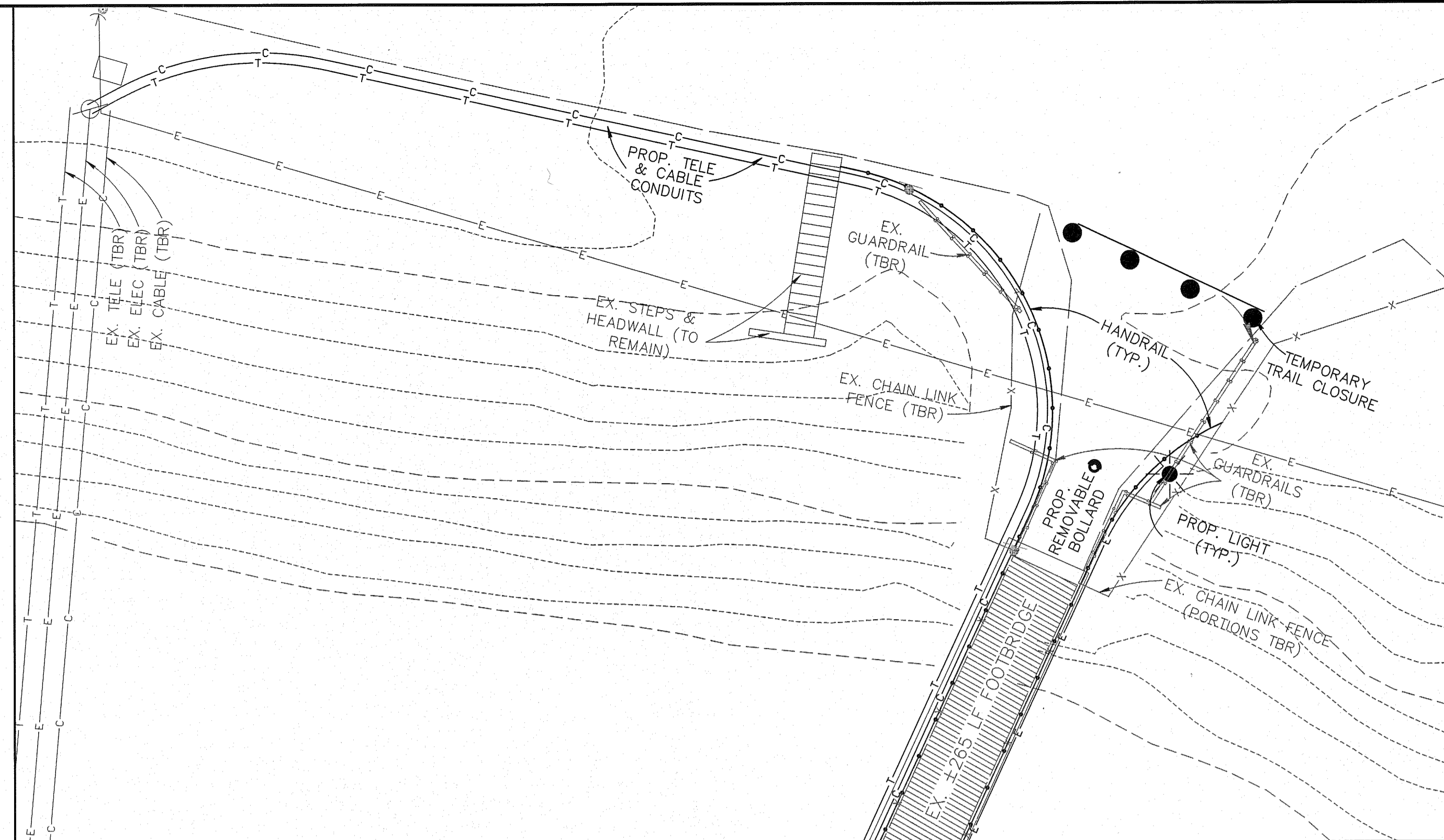
Central Office
13580 Grange Drive Suite 301
Woodbridge, VA 22192
PH 703.670.0985 FX 703.670.7769

Metro Office
1483 Chain Bridge Road, Suite 300
McLean, VA 22101-5703
PH 703.670.0985 FX 703.670.7769


NAD 83 NORTH



NOTE: SEE SHEET 02 FOR PEDESTRIAN
BRIDGE DETAILS & STRUCTURAL DRAWINGS
FOR CONNECTIONS TO EXISTING BRIDGE DECK.



GRADING PLAN RIVER PARK RESTROOM & MAINTENANCE FACILITY



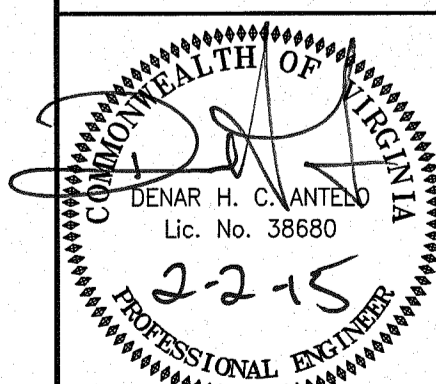
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 Engineers | Surveyors | Planners

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4936 Southpoint Parkway
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13580 Group Drive, Suite 301
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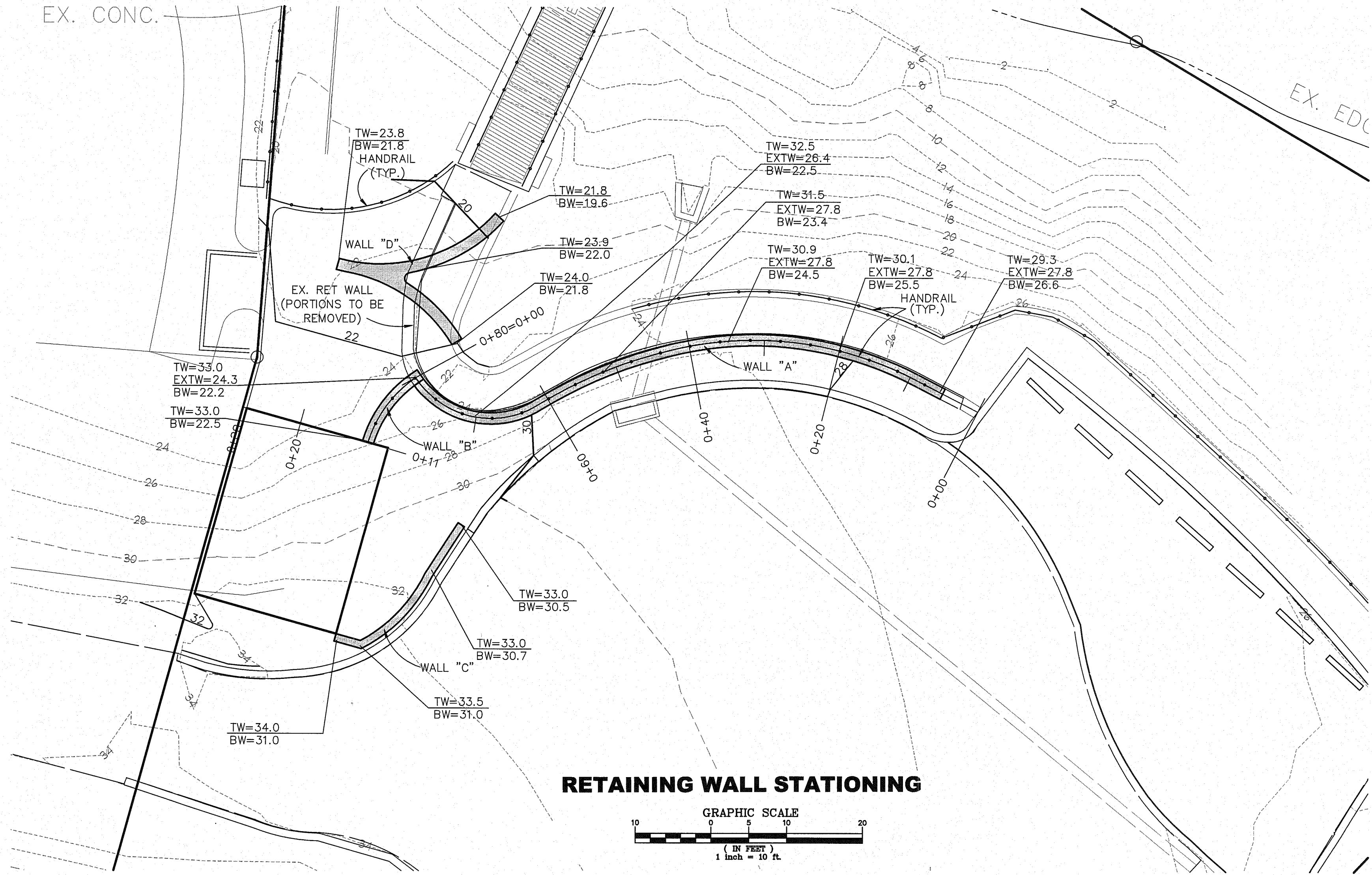
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www.enggroup.com

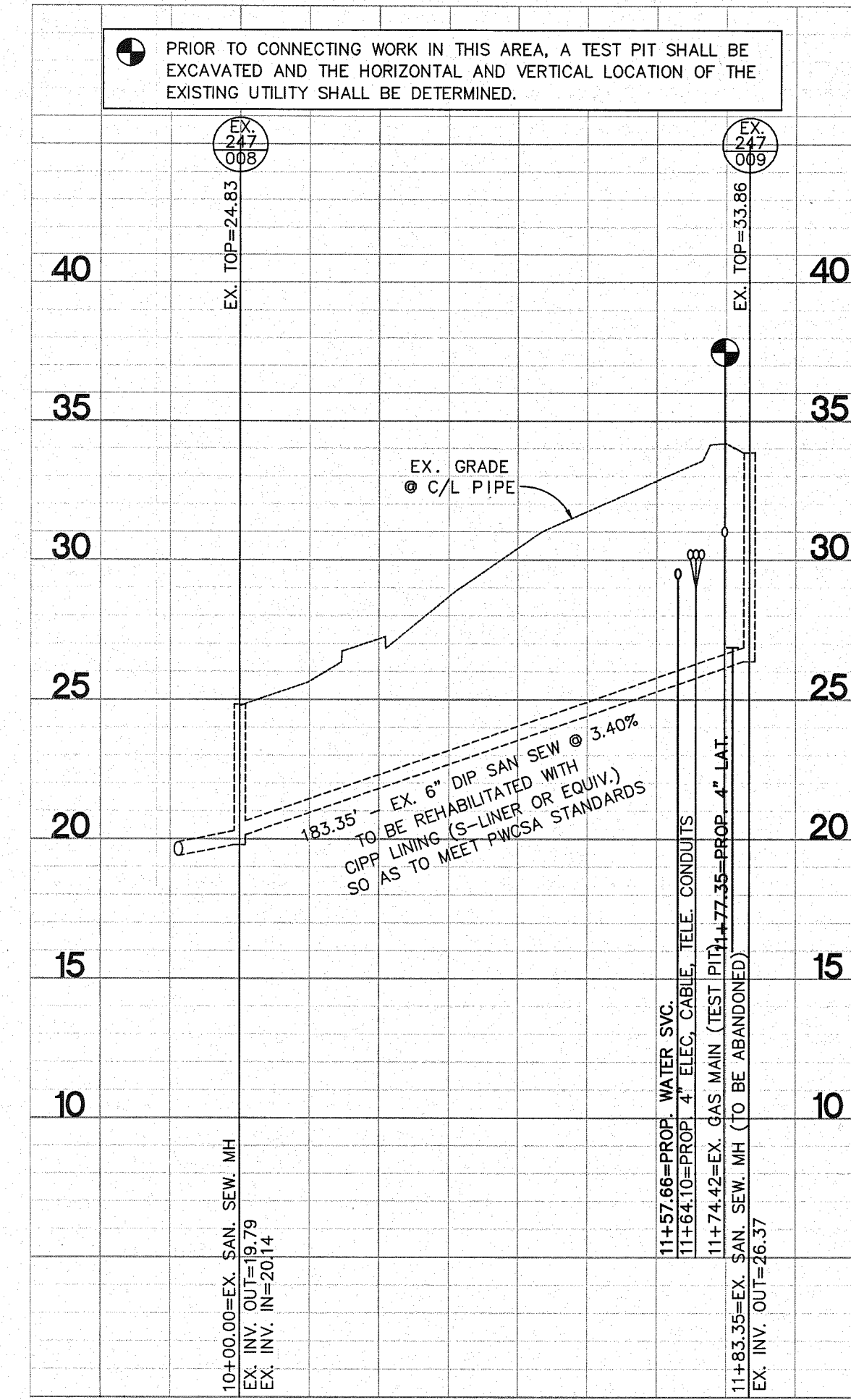
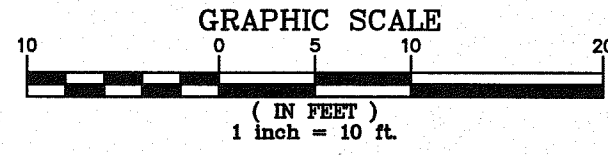
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ENGINEERING GROUPE PROJECT STATUS		DATE: NOVEMBER 2014
		SCALE: 1"=10'
		DESIGNER: MAW
		DRAFTSMAN: D.M.P.
		FILE NO. SP-280
DATE	ACTION	SHEET 05 OF 10

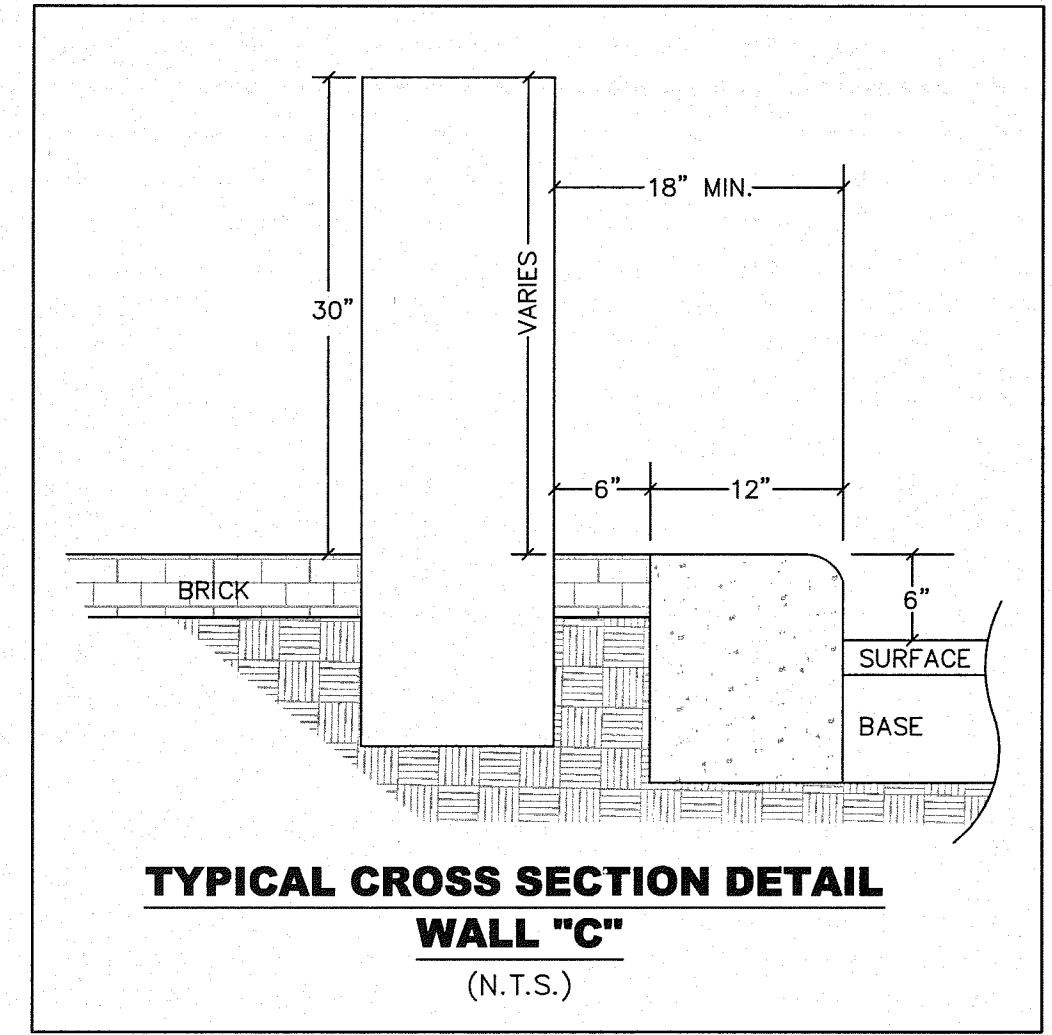
EX. CONC.



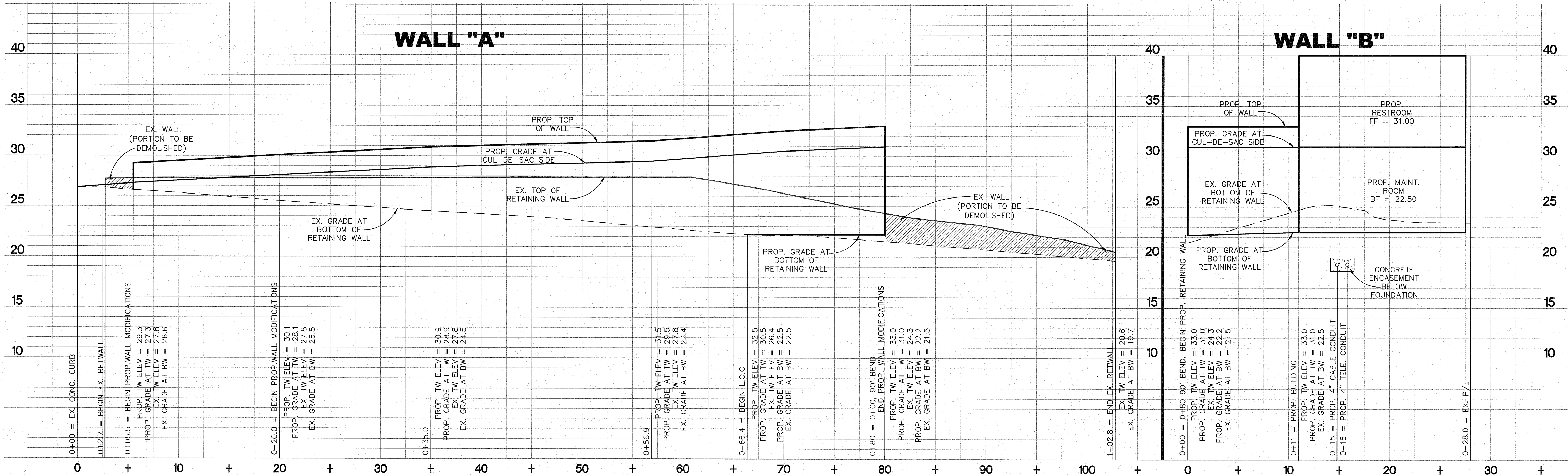
RETAINING WALL STATIONING



EX. PRIVATE SANITARY SEWER PROFILE
H SCALE: 1"=50'
V SCALE: 1"=5'



- GENERAL NOTES:
1. THE EXISTING 6" DIP SANITARY SEWER IS TO BE PRIVATELY OWNED AND MAINTAINED BY THE TOWN OF OCCOQUAN AS A PRIVATE LATERAL. IT IS UP TO THE TOWN TO DETERMINE IF THE LATERAL IS IN A CONDITION SUITABLE FOR OPERATION. THE LINE MUST BE MADE WATERTIGHT AND VERIFIED BY THE CONTRACTOR TO THE SERVICE AUTHORITY PRIOR TO THE LINE BEING PUT INTO SERVICE.
 2. EX. 6" DIP SANITARY SEWER LINE IS TO BE LINED (CIPP).
 3. THE CONTRACTOR SHALL PROVIDE A MEANS TO PRESSURE TEST THE NEWLY LINED 6" PIPE. THE LINE SHALL BE PRESSURE TESTED BY THE CONTRACTOR IN ACCORDANCE WITH PWCSA STANDARDS. THE TEST RESULTS MUST SATISFY THE SERVICE AUTHORITY THAT THE LINE IS WATERTIGHT.
 4. PWCSA IS TO TV INSPECT THE 6" LATERAL AFTER IT IS LINED AND PRIOR TO BEING PUT INTO SERVICE. ALL ISSUES REPORTED BY PWCSA ARE TO BE REMEDIATED.
 5. SEPARATE BUILDING PERMIT REQUIRED FOR RETAINING WALLS.

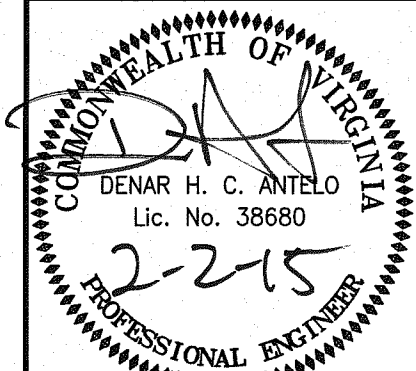


EX. RETAINING WALL PROFILE
(AS SEEN FROM LOWER BRICKWALK)
H SCALE: 1"=5'
V SCALE: 1"=5'

PROP. RETAINING WALL
& BLDG. PROFILE
(AS SEEN FROM LOWER BRICK APRON)
H SCALE: 1"=5'
V SCALE: 1"=5'

ENGINEERING GROUP		PROJECT STATUS	
DATE	ACTION	DATE	ACTION

DATE: NOVEMBER 2014
SCALE: AS SHOWN
DESIGNER: MAW
DRAFTSMAN: D.M.P.
FILE NO. SP-280
SHEET 06 OF 10



PROFILES
RIVER PARK
RESTROOM & MAINTENANCE FACILITY
TOWN OF OCCOQUAN, VIRGINIA

COUNTY REVISIONS		DATE		NO.	

The Engineering Group Inc.
Engineers | Surveyors | Planners

Main Office: 1488 Chesapeake Blvd., Suite 300, Alexandria, VA 22304-5703, PH 703.670.0985, FX 703.670.7769
Central Office: 13580 Woodbridge Road, Suite 301, Woodbridge, VA 22192, PH 703.670.0985, FX 540.710.5988
South Office: 4096 S. Lakeshore Highway, Fredericksburg, VA 22407, PH 540.710.5987, FX 540.710.5988

NOTES

1. Methods and materials used in the construction of water mains, sanitary sewers and appurtenances shall be in conformance with the current Prince William County Service Utility Standards Manual (USM) and the Virginia Department of Health Regulations.

2. Approval of these plans by the Service Authority will in no way relieve the owner from complying with the methods, policies or requirements stated in the Service Authority's Utility Standards Manual (USM).

3. No trees, fences or other permanent structures will be located on any waterline or sanitary sewer easement without written permission from the Prince William County Service Authority.

4. Contractor to notify the Service Authority at least two (2) working days, but not more than ten (10) working days prior to commencement of demolition, or excavation in areas with underground water and sewer lines. Blasting is not permitted near the existing Fairfax Water structure.

5. a) Water Service Level OCCOQUAN
b) Sewer Shed OCCOQUAN

6. All subdivisions will require an address listing approved by the Prince William County Mapping Office. The address listing must be presented to the Service Authority at the time the utility permit is issued. Forms are available at the Service Authority. (Fax copies are not acceptable.)

7. All grinder pumps will be privately owned and maintained, unless otherwise noted.

8. Low pressure sewer systems are subject to the review of the State Health Department and requires DEQ approval.

9. The developer is responsible for all costs associated with damages to or relocation of water or sanitary sewer mains or service lines caused by the construction of this project.

10. The contractor shall coordinate all relocation of water or sanitary sewer facilities with the Service Authority's Inspector. No shut offs shall be done without the prior approval of the Service Authority's Inspector. The Inspector may require the contractor to submit a relocation work plan for approval prior to the commencement of the relocation work. The work plan will detail how the work will be done and the manpower, materials, and equipment that will be at the site to perform the work.

11. Existing unused water service lines shall be exposed at the corporation stop on the main and shall be cut and crimped per the direction of the PWCSA Inspector.

12. Existing unused laterals are to be cut and capped at the main per the direction of the PWCSA Inspector.

13. When an existing water service or sanitary sewer lateral lateral will be reused as part of a new development, the Service Authority shall inspect the existing service line or lateral to insure that they are serviceable and meet current PWCSA material specifications. Any defects or out-of-date materials shall be repaired or replaced to the satisfaction of the Service Authority before the existing water service or sanitary sewer lateral is placed back in service.

THRUST RESTRAINT

MINIMUM DESIGN PARAMETERS:
PIPE MATERIAL: N/A
SOIL TYPE: N/A
SAFETY FACTOR: N/A
TRENCH TYPE: N/A
TEST PRESSURE: N/A
BURIED DEPTH: AS SHOWN IN THE PROFILES

(MIN. 1.5 TO 1)
(MIN. 3)
(100 PSI PLUS THE MAX STATIC PRESSURE OR 150 PSI, WHICH EVER IS GREATER)

*THE RESTRAINING LENGTH FOR EACH FITTING, REDUCER & DEAD END IS SHOWN AND SPECIFIED IN THE PROFILE SHEETS.

LOCAL FACILITIES CHARGE

THE PROPERTIES BEING DEVELOPED IN CONJUNCTION WITH THIS PROJECT ☐ ARE ☒ ARE NOT SUBJECT TO A LOCAL FACILITIES CHARGE. LFC Area: _____

MASTER PLAN UTILITY ADJUSTMENT

A MASTER PLAN UTILITY ADJUSTMENT AGREEMENT ☐ DOES ☒ DOES NOT EXIST BETWEEN THE SERVICE AUTHORITY AND THE DEVELOPER FOR DEFINED BETTERMENTS.

*DESIGN OR CONSTRUCTION CHANGES MUST CARRY THE CONSENT OF PWCSA ENGINEERING.

*THE DEVELOPER SHOULD REQUEST REIMBURSEMENT PER THE AGREEMENT AFTER BETTERMENTS ARE INSTALLED AND TESTED.

PWCSA WATER & SEWER MAIN INSPECTION FEES

	Original Qty. (Project Total)	Rev 1 Qty. (Project Total)	Rev 2 Qty. (Project Total)	Net Increase
WATER MAIN	MIN			(L.F.) x \$3.50 = \$350
SEWER MAIN	MIN			(L.F.) x \$5.45 = \$545
TV SEWER MAIN				(L.F.) x \$2.45 = \$0.00
				TOTAL = \$895

FEES UPDATED 9/1/12

NOTE: Minimum fee of \$350 is required for water inspection service if water main is less than 100 L.F.
Minimum fee of \$545 is required for sewer inspection service if sewer main is less than 100 L.F.

PWCSA AS BUILT FEES

	Original Qty. (Project Total)	Rev 1 Qty. (Project Total)	Rev 2 Qty. (Project Total)	Net Increase
WATER MAIN	MIN			(L.F.) x \$1.20 = \$0.00
SEWER MAIN	MIN			(L.F.) x \$1.80 = \$0.00
				TOTAL = \$1,000 (Minimum \$1,000)

FEES UPDATED 9/1/12

NOTE: Minimum fee of \$1000 is required for all plans connecting to utilities or installing main.
Fees shall be computed on a linear footage base for plan revisions that propose additional main as part of an actively developing project for which PWCSA has not yet executed its as-built.

AS BUILT RELEASE OF PLANS

THE UNDERSIGNED ENGINEER/ FIRM AGREES THAT THE PRINCE WILLIAM COUNTY SERVICE AUTHORITY SHALL HAVE THE RIGHT TO USE THESE PLANS FOR THE PREPARATION OF AS-BUILT RECORDS, AS NECESSARY.

THE ENGINEER/ FIRM FURTHER AGREES THAT THE RIGHT TO USE THE PLANS SHALL BE PROVIDED WITHOUT COST TO THE SERVICE AUTHORITY.

NAME: _____ DENAR ANTELO
(TYPE OR PRINT)

TITLE: _____ DIRECTOR OF ENGINEERING

FIRM: _____ THE ENGINEERING GROUPE, INC.

SIGNATURE: _____

DATE: _____

LOCAL REVIEW AUTHORITY INFORMATION

PLAN TITLE: RIVER PARK — RESTROOM & MAINTENANCE FACILITY

PWC PLAN NO.: 15-OCC01-R00

ENGINEER: THE ENGINEERING GROUPE, INC.

MAP NO.: _____

SEWER

PROJECTED POPULATION: N/A

SEWER MAIN SIZE AND LENGTH: 8" — N/A
(Note: lines larger than 24" must be submitted to VDH for approval) 10" — N/A
12" — N/A

NUMBER OF MANHOLES: N/A

WATER

PIPE SIZES: 4" — N/A
6" — N/A
8" — N/A
12" — N/A
16" — N/A
18" — N/A

* CONNECTIONS

NUMBER OF WATER METERS: 1

RESIDENTIAL METER SIZE: _____

NUMBER OF FIRE HYDRANTS: 0

FIRE FLOW INFORMATION

A HYDRAULIC ANALYSIS IS REQUIRED OF ANY PROJECT EXTENDING WATER MAINS. A HYDRANT FLOW TEST CAN BE USED IN PLACE OF AN ANALYSIS TO CALCULATE AVAILABLE FIRE FLOW WHEN NO NEW WATER MAIN IS PROPOSED OR ONLY A FIRE HYDRANT IS SET.

HYDRAULIC MODEL SUMMARY: _____ HYDRANT FLOW TEST: _____

a) Minimum Pressure: N/A b) Static Pressure: _____

b) Maximum Pressure: N/A c) Residual Pressure: _____

c) Fire Flow: N/A d) Flow: _____

d) Available Fire Flow at 20 psi: _____

THIS PROJECT IS NOT SUBJECT TO PRINCE WILLIAM COUNTY FIRE FLOW REQUIREMENTS, OR TOWN FIRE FLOW REQUIREMENTS. IN THE INTEREST OF ASSURING PUBLIC SAFETY, AN HYDRANT FLOW TEST WAS ORDERED 11/17/14. RESULTS EXPECTED WEEK OF 2/17/15.

20" WATER METER BOX COVER (A.Y. McDONALD #74ML20RGP or APPROVED SUBSTITUTE) SET-UP FOR SCHLUMBERGER PRO-READ SYSTEM.

FINISH GRADE

36" MIN.

2" COPPER METER SETTER MUELLER B-2423

PACK JOINT W/ SET-LOCKING MUELLER P-15428 OR APPROV'D EQUAL

1" TO 2" ADAPTER (2 EACH) A.Y. McDONALD #1047 or APPROVED SUBSTITUTE PROVIDED BY CONTRACTOR

5.0' MIN.

4" DIP FROM MAIN TO METER SETTER

STONE DUST OR SUITABLE SOIL, INSIDE OF CROCK, NOT TO EXCEED TOP OF BRICK (NO GRAVEL)

COMMON BRICK AT QUARTER POINTS

SOLID CONCRETE BLOCK

BYPASS CLOSED & CABLE TIED

FLOW

NOTES:
1. METER TO BE OBTAINED FROM THE SERVICE AUTHORITY.
2. 36"W x 30"H ONE PIECE BOX MUST BE USED.
3. ALL ADAPTERS AND GASKETS ARE THE CONTRACTOR'S RESPONSIBILITY.
4. METER BOX MATERIAL: CONCRETE, PVC or RIGID FRP.
5. COPPER METER SETTER TO BE MUELLER B-2423 OR APPROVED EQUAL.
6. NO FIELD ADJUSTMENT OF METER SETTER IS PERMITTED.
7. ONLY 2" METER SETTER IS TO BE INSTALLED.

1" METER IN 2" COPPER SETTER
for COMMERCIAL USE (ONLY)
N.T.S. W05.07.00

REMOVE MANHOLE FRAME & COVER.
REMOVE ALL ADJUSTMENT RINGS.

REMOVE MINIMUM 24" FROM BLOCK OR BRICK MANHOLES.
REMOVE CONE SECTION FROM PRECAST MANHOLES.

FILL REMAINING AREA WITH #57 STONE.

BULK HEAD ALL CONNECTIONS TO MANHOLE WITH A PRE-MIXED, FAST SETTING VOLUME STABLE, WATERPROOF CEMENT, or AS DIRECTED BY SERVICE AUTHORITY FIELD INSPECTOR.

NOTES:
1. WHERE MANHOLE IS LOCATED IN PAVEMENT, PAVEMENT SHALL BE RESTORED IN ACCORDANCE WITH VDOT STANDARDS.
2. MANHOLES LOCATED IN EASEMENT AREAS SHALL BE RESTORED SIMILAR TO SURROUNDING CONDITIONS.

ABANDONMENT OF MANHOLE
N.T.S. S10.07.01

FIXTURE UNIT LIST & METER SIZING CALCULATIONS

FIXTURE	VALUE @ 60 PSI	NO. OF FIXTURES	FIXTURE VALUE
DRINKING FOUNTAIN — PUBLIC	2	4	8
SERVICE SINK	4	1	4
TOILET — FLUSH VALVE	35	4	140
URINAL — PEDESTAL FLUSH VALVE	35	2	70
WASH SINK	4	4	16
HOSE — 50' WASHDOWN — 1/2"	5	2	10
COMBINED FIXTURE VALUE TOTAL			248
CUTOMER PEAK DEMAND x PRESS. FACTOR			34 GPM *1.0
TOTAL FIXED DEMAND			34 GPM

SANITARY LATERAL SCHEDULE

From Manhole: 247/008	To Manhole: 247/009	Slope: 3.40%	Length: 183.35'	Low Invert: 19.79	Material: 6" DIP	PWCSA Use Only								
Ejector Pump Required <input checked="" type="checkbox"/>	Lot No.	Station	Invert @ Main	Crown @ Main	Length of Lateral	Slope of Lateral (%)	Riser Height	Lateral Elev. @ End	Ground Elev. @ End	Basement Floor Elev. @ End	Difference Basement Floor Elev. to Crown @ Main	Lateral Material	Date Installed	Stub Installed % of Grade
<input checked="" type="checkbox"/>	1	11+77.35	26.17'	26.87'	6'	2.08%	0'	26.87'	32.3'	22.50'	-4.37'	4" DIP		

MULTI-DWELLING OR NON-RESIDENTIAL METER SCHEDULE

Building Identifier	Building Address	Building Use	If applicable number of dwelling units	Meter Size	Peak demand in gpm	If applicable continuous demand in gpm	Account Type				Meter Setter:		
							Water & Sewer	Sub-Meter Account	Water Only Account	Sewer Only Account	3/4" Yoke	1" Yoke	2" Setter
RESTROOM	458 MILL STREET, OCCOQUAN	RESTROOM & MAINT/STORAGE	N/A	1.0"	34	N/A	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
							<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NOTE: A fixture unit list and meter sizing calculations in accordance to AWWA M22 2nd edition is to be inserted in the plan set supporting the information in this table.

VALVE SCHEDULE

Qty.	Valve Size	Manufacturer (PWCSA use)
1	4 — inch	
	6 — inch	
	8 — inch	
	10 — inch	
	12 — inch	
	14 — inch	
	16 — inch	
	18 — inch	
	24 — inch	

SA

Service Authority

Prince William County

ENGINEERING GROUPE PROJECT STATUS

DATE ACTION

SHEET REVISED AS OF FEBRUARY, 2011

WATER AND SANITARY SEWER INFORMATION

DATE: NOVEMBER 2014
SCALE: N/A
DESIGNER: MAW
DRAFTSMAN: D.M.P.
FILE NO. SP-280
SHEET 07 OF 10

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COUNTY REVISIONS

DATE

NO.

PWCSA INFORMATION SHEET
RIVER PARK
RESTROOM & MAINTENANCE FACILITY
TOWN OF OCCOQUAN, VIRGINIA

COMMONWEALTH OF VIRGINIA
DENAR H. C. ANTELO
Lic. No. 38680
2-2-15
PROFESSIONAL ENGINEER

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Project Summary & Analysis

PLAN TITLE: RIVER PARK RESTROOM & MAINTENANCE FACILITY

PWC PLAN NO.: 15-OCC01-R00

PWCSA Inspector:

Contractor(s):

Type of project (Check all that apply):

☐ Residential SFD

☐ Residential Townhouses

☐ Residential Multi-family

☒ Public Improvement Plan

☐ Road Plan

☐ Off Site Utilities

☐ Non-Residential 1 pad site

☐ Non-Residential 2-4 pad sites

☐ Non-Residential 5+ pad sites

Date Project Started:

Date All Water & Sanitary Sewer Mains Completed & Tested:

Date Full Beneficial Use Assigned:

Date Released from Bond:

Number of lots or pad sites:

Quantity of water main:

Number of meter taps to the main:1

Quantity of sewer main:

Number of manholes:

Number of lateral connects to the main:

Description of major factors that added significant inspection time (rock, bores, night work, restrictions in right-of-way, temporary services, pump arounds, etc.)

Project Proficiency:

(Rate project on a scale of 1 to 5 with 1 being the most proficient.)

Estimated Total Office/Mis. Time:

Estimated Total Field Time:

Number of Beneficial Use Inspections and Estimated Time:

Number of Bond Release Inspections and Estimated Time:

Estimated Total Time:

WATER INFORMATION

Date:

Total Time Spent For Day:

Stations:

Pipe Size:

Footage:

Comments:

SANITARY SEWER INFORMATION

Stations:

Pipe Size & Material:

Lateral Location:

Run Location:

% of Grade:

Comments:

PWCSA INFORMATION SHEET

RIVER PARK RESTROOM & MAINTENANCE FACILITY

TOWN OF OCCOQUAN, VIRGINIA

SA

Service Authority

Prince William County

PWCSA INSPECTOR WATER & SANITARY SEWER LOG SHEET

ENGINEERING GROUPE PROJECT STATUS

DATE: NOVEMBER 2014

SCALE: N/A

DESIGNER: MAW

DRAFTSMAN: D.M.P.

FILE NO. SP-280

SHEET 08 OF 10

DATE

ACTION

COMMONWEALTH OF VIRGINIA

DENAR H. C. ANTELO

Lic. No. 38680

2-8-15

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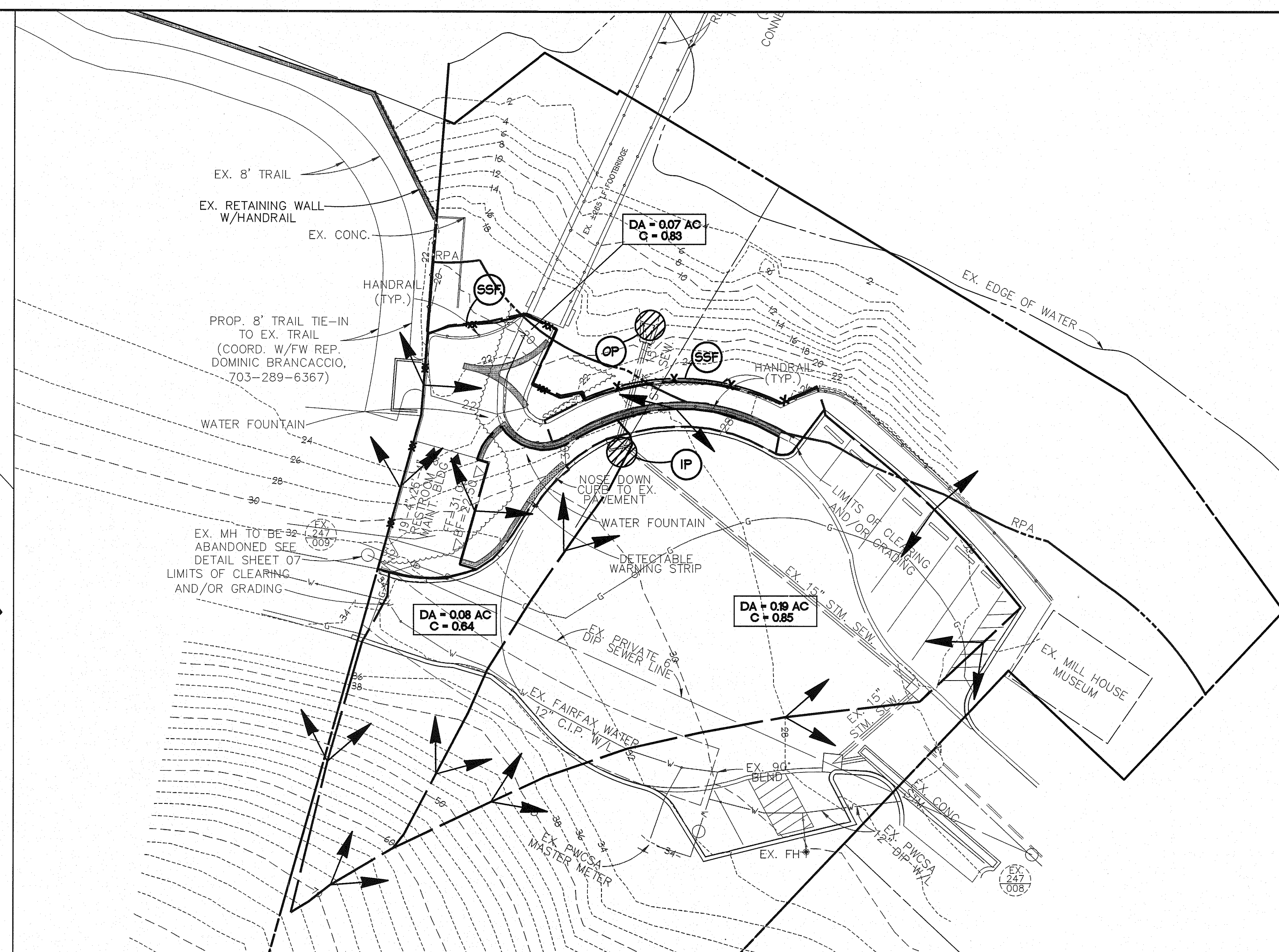
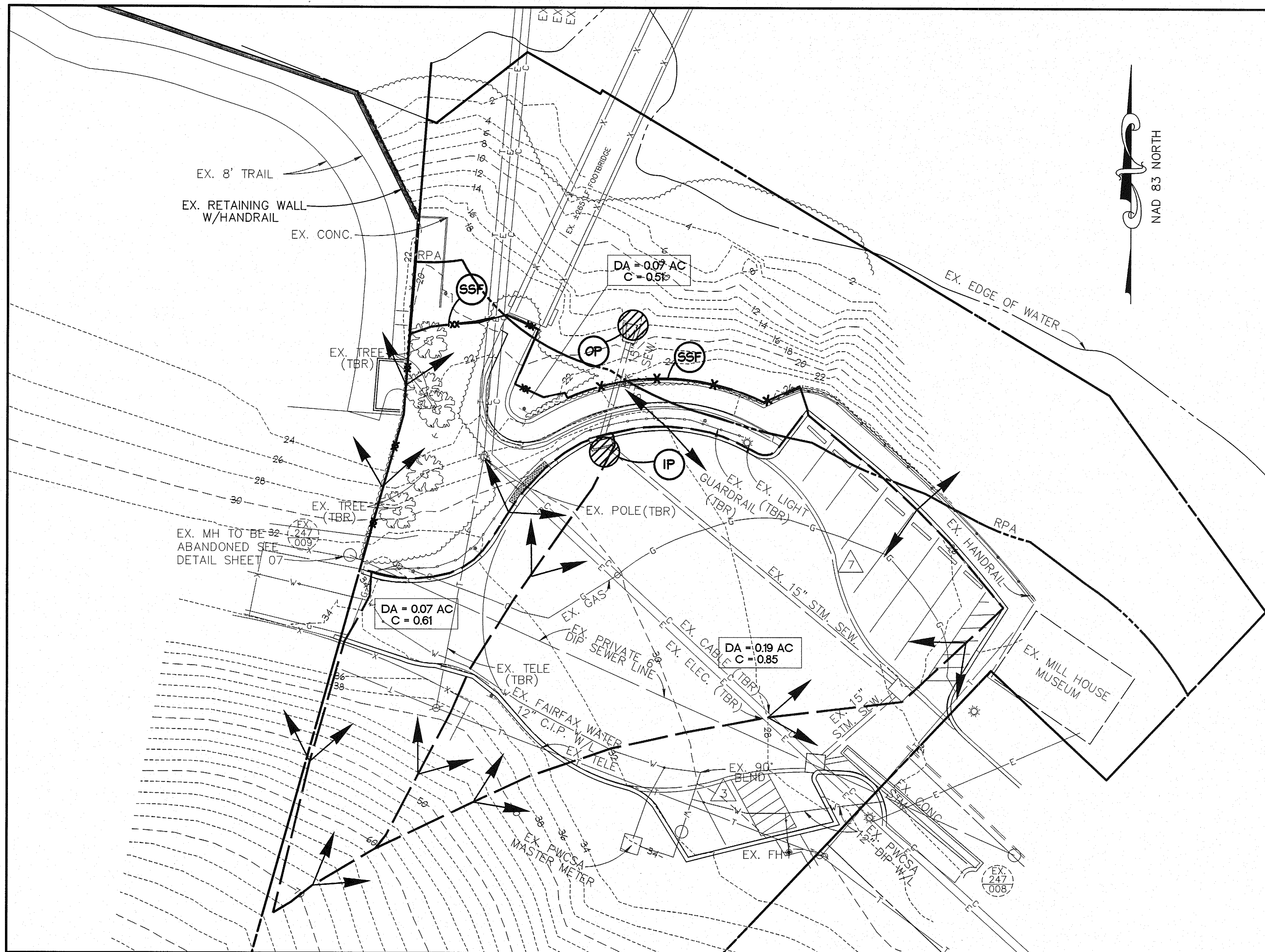
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The Engineering Groupe Inc.

Engineers | Surveyors | Planners

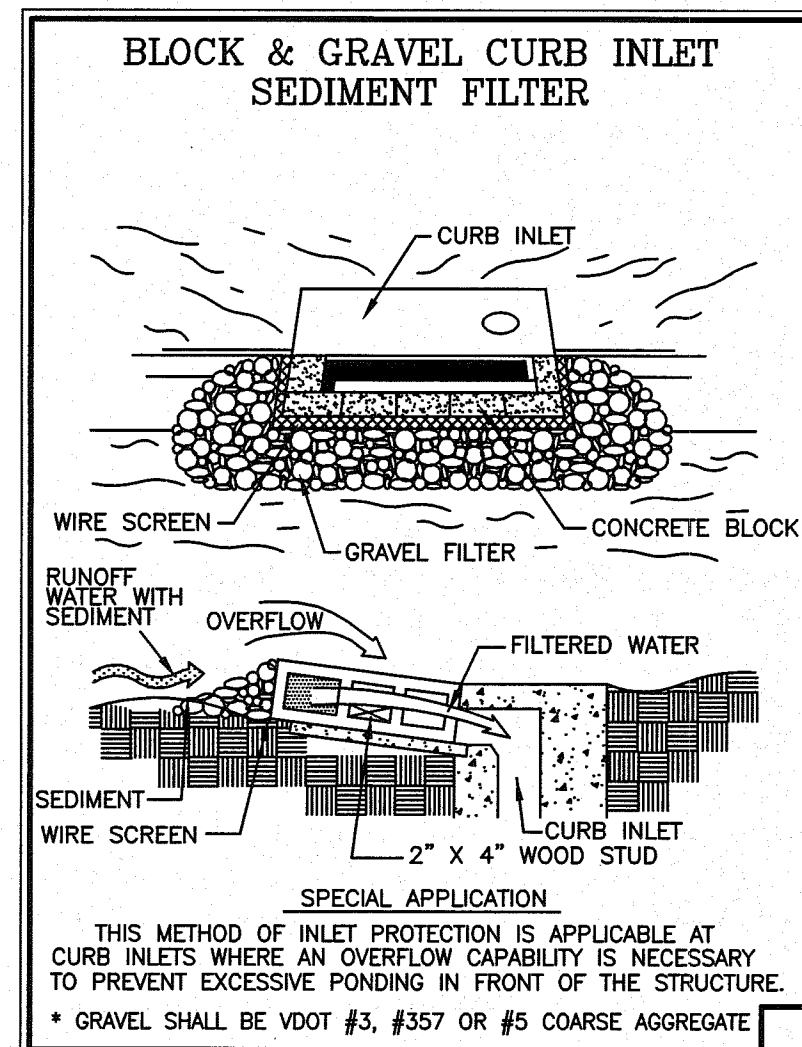
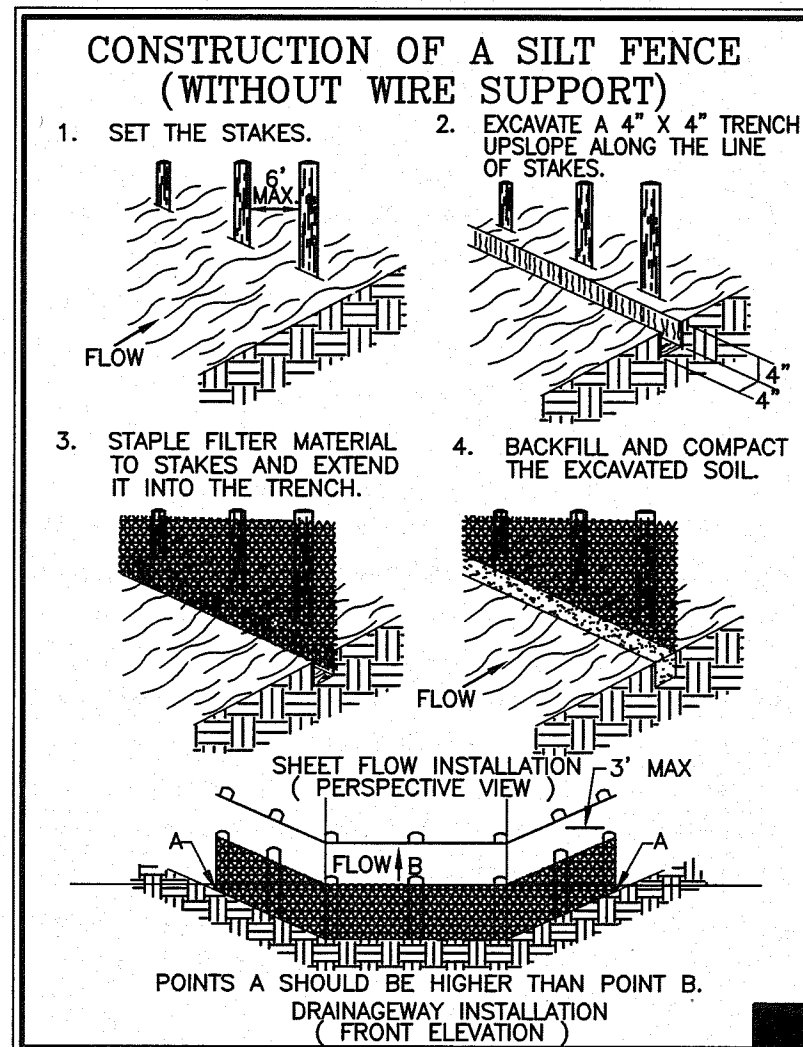
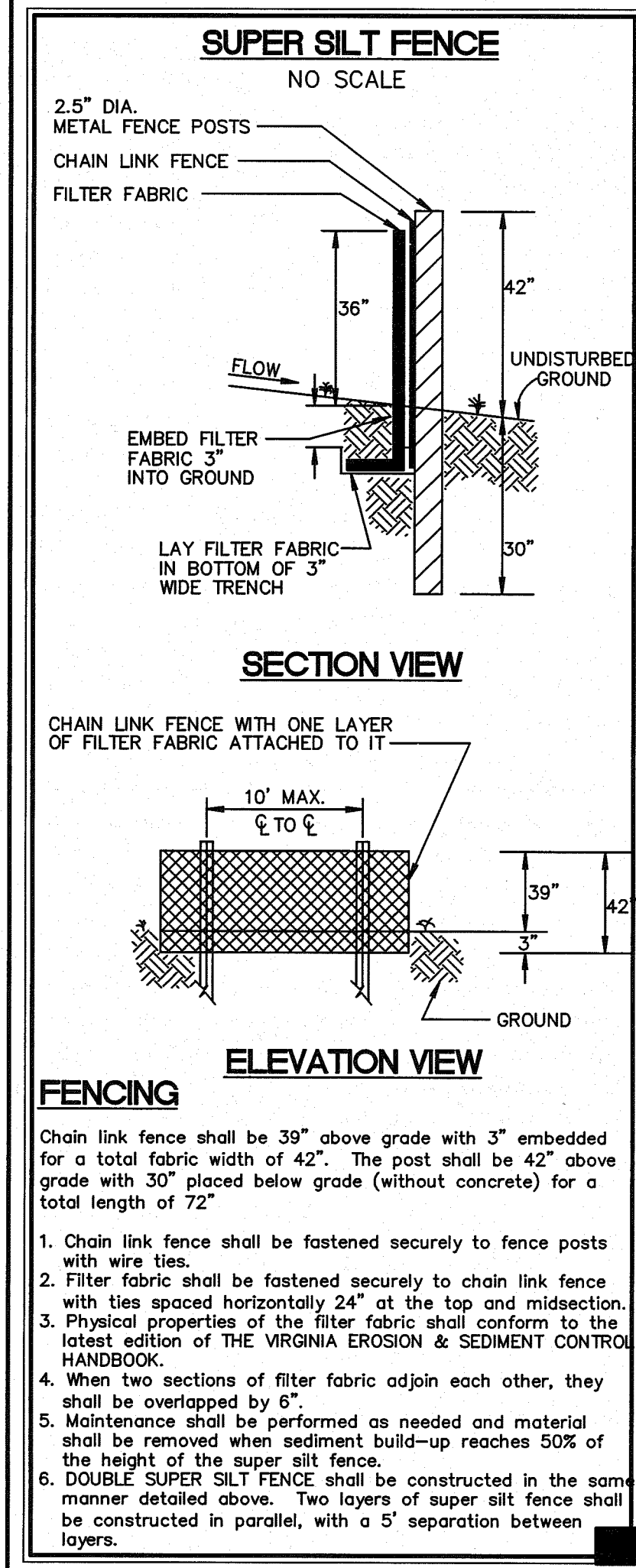
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EROSION + SEDIMENT CONTROL PLAN - PHASE I
SCALE: 1"=20'

EROSION + SEDIMENT CONTROL PLAN - PHASE II
SCALE: 1"=20'



EROSION AND SEDIMENT CONTROL NARRATIVE: PROJECT DESCRIPTION

THIS SITE PLAN CONSISTS OF DESIGN INFORMATION NECESSARY TO CONSTRUCT THE RIVER PARK RESTROOM & MAINTENANCE FACILITY. PROPOSED IMPROVEMENTS INCLUDE THE CONSTRUCTION OF A BATHROOM/MAINTENANCE FACILITY, RETAINING WALLS, KNEEWALLS, BRICK AND STONE-DUST TRAILS, HISTORIC DISPLAYS AND RELATED INFRASTRUCTURE. THE TOTAL AREA OF LAND DISTURBANCE IS LESS THAN 2,500 SQUARE FEET.

EXISTING SITE CONDITIONS
THE TOPOGRAPHY ON THIS PARCEL RANGES IN ELEVATION FROM 0 FEET TO 82 FEET ABOVE SEA LEVEL. THE LAND ON SITE IS STEEPLY SLOPING TO THE NORTH AND WEST, WHERE THE PERCENT GRADE REACHES VALUES UPWARDS OF 50%. ATTRIBUTED TO PREVIOUS FILL DEVELOPMENT AND THE GENERAL NATURE OF THE OCCOQUAN RIVER VALLEY & FALL LINE.

THE VEGETATION IS GENERALLY SECOND GROWTH AND VOLUNTEER SPECIES. FIVE INSIGNIFICANT TREES ARE PROPOSED FOR REMOVAL WITH THIS PROJECT AND WILL BE REPLACED AT A 1:1 RATIO.

EASEMENTS, PRESCRIPTIVE RIGHTS OF WAY AND RIGHTS OF WAY FROM THE TOWN'S 1804 PLAT EXIST ON THE SUBJECT PROPERTY. OTHER IMPROVEMENTS EXIST ON SITE, INCLUDING RETAINING WALLS, BRICK SIDEWALKS AND ELECTRICAL, CABLE, TELEPHONE, GAS, SEWER AND WATER UTILITIES.

ADJACENT PROPERTIES
THE SUBJECT PARCEL IS BOUND TO THE NORTH BY THE OCCOQUAN RIVER, TO THE WEST BY THE FORMER FAIRFAX WATER "RIVER STATION" TREATMENT PLANT (CURRENTLY UNDER CONVERSION TO BECOME A TOWN PARK), TO THE SOUTH AND SOUTHEAST BY THE ROCKLEDGE MANSION, AND TO THE EAST BY A BOAT/MARINE STORAGE FACILITY.

CRITICAL EROSION AREAS
WHILE THE SOILS IN THE AREA ARE GENERALLY SEVERE, AND THE SLOPES OF THE SITE CONSIDERABLY STEEP, THE SITE IS GENERALLY VEGETATED AND BEARS LARGE GEOLOGICAL ROCK FORMATIONS. THE LIKELIHOOD OF CRITICAL EROSION IS FURTHER MITIGATED BY THE MINOR NATURE OF THE PROJECT, AS THE LAND DISTURBANCE FOOTPRINT IS LESS THAN 2500 SF.

MINIMUM STANDARDS
FOR EVERY MEASURE EMPLOYED TO SATISFY EACH OF THE NINETEEN MINIMUM STANDARDS APPLICABLE TO THIS DEVELOPMENT, THE NUMBER FOR THE PARTICULAR STANDARD BEING SATISFIED HAS BEEN PLACED IN PARENTHESES NEXT TO THE CORRESPONDING MEASURE. STORM SEWER COMPUTATIONS AND CHANNEL COMPUTATIONS HAVE BEEN PROVIDED ON SHEETS 38 AND 40, RESPECTIVELY, DEMONSTRATING COMPLIANCE WITH MS-19. THE FOLLOWING MINIMUM STANDARDS DO NOT APPLY TO THIS DEVELOPMENT: MS-12, MS-13, MS-14, AND MS-15.

EMBANKMENT FILL MATERIAL
THE FILL MATERIAL SHALL BE TAKEN FROM APPROVED BORROW AREAS. IT SHALL BE CLEAN MINERAL SOIL, FREE OF ROOTS, WOODY VEGETATION, STUMPS, SOD, OVERSIZED STONES, ROCKS, OR OTHER PERISHABLE OR OBJECTIONABLE MATERIAL. THE MATERIAL SELECTED MUST HAVE ENOUGH STRENGTH FOR THE DAM TO REMAIN STABLE AND BE TIGHT ENOUGH, WHEN PROPERLY COMPACTED, TO PREVENT EXCESSIVE PERCOLATION OF WATER THROUGH THE DAM. FILL CONTAINING PARTICLES RANGING FROM SMALL GRAVEL OR COARSE SAND TO FINE SAND AND CLAY IN DESIRED PROPORTION IS APPROPRIATE. ANY EMBANKMENT MATERIAL SHOULD CONTAIN APPROXIMATELY 20% CLAY PARTICLES BY WEIGHT. USING THE UNIFIED SOIL CLASSIFICATION SYSTEM, SC (CLAYEY SAND), GC (CLAYEY GRAVEL) AND CL ("LOW LIQUID LIMIT" CLAY) ARE AMONG THE PREFERRED TYPES OF EMBANKMENT SOILS. AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. THE FILL MATERIAL SHOULD CONTAIN PROPER AMOUNT OF MOISTURE TO ENSURE THAT 95% COMPACTION WILL BE ACHIEVED. FILL MATERIAL WILL BE PLACED IN 6-INCH CONTINUOUS LAYERS OVER THE ENTIRE LENGTH OF THE FILL. COMPACTION SHALL BE OBTAINED BY ROUTING THE HAULING EQUIPMENT OVER THE FILL SO THAT THE ENTIRE SURFACE OF THE FILL IS TRANSFERRED BY AT LEAST ONE WHEEL OR TREAD TRACK OF THE EQUIPMENT, OR BY USING A COMPACTOR. SPECIAL CARE SHALL BE TAKEN IN COMPACTING AROUND THE ANTI-SEEP COLLARS (COMPACT BY HAND, IF NECESSARY) TO AVOID DAMAGE AND ACHIEVE DESIRED COMPACTION. THE EMBANKMENT SHALL BE CONSTRUCTED TO AN ELEVATION 10% HIGHER THAN THE DESIGN HEIGHT TO ALLOW FOR SETTLEMENT IF COMPACTION IS OBTAINED WITH HAULING EQUIPMENT. IF COMPACTORS ARE USED FOR COMPACTION, THE OVERBUILD MAY BE REDUCED TO NOT LESS THAN 5%.

EROSION AND SEDIMENT CONTROL MEASURES

UNLESS OTHERWISE INDICATED, ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE MINIMUM STANDARDS AND SPECIFICATIONS OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK.

NO DISTURBED AREAS SHALL BE DENuded FOR MORE THAN SEVEN (7) DAYS, EXCEPT FOR THAT PORTION OF THE SITE IN WHICH WORK WILL BE CONTINUOUS BEYOND SEVEN (7) DAYS. SILT FENCE BARRIERS AND ALL OTHER PERIMETER CONTROL MEASURES, AS INDICATED ON THE PLANS SHALL BE PLACED IN CONJUNCTION WITH CLEARING AND PRIOR TO ROUGH GRADING. (MS-1)

ANY STOCKPILED MATERIAL WHICH WILL REMAIN IN PLACE LONGER THAN SEVEN (7) DAYS SHALL BE SEEDED AND MULCHED FOR TEMPORARY VEGETATION. WHEN NECESSARY TO DE-WATER A TRENCH, THE PUMP DISCHARGE HOSE SHALL BE OUTLETTED INTO A STABILIZED AREA OR SEDIMENT TRAPPING STRUCTURE. (MS-1, MS-2)

THE CONTRACTOR SHALL MAKE PROVISIONS FOR DUST CONTROL DURING CONSTRUCTION ACTIVITIES. ACCEPTABLE MEASURES FOR DUST CONTROL INCLUDE TEMPORARY VEGETATIVE COVER, MULCHING, TILLAGE, IRRIGATION, SPRAY-ON ADHESIVES, STONE BARRIERS, AND CALCIUM CHLORIDE. PLEASE SEE STD & SPEC 3.39 OF THE VESCH FOR A DESCRIPTION OF EACH METHOD, AND HOW IT IS USED MOST EFFECTIVELY.

STRUCTURAL PRACTICES

SILT FENCE BARRIER - 3.05 SILT FENCE SEDIMENT BARRIERS WILL BE INSTALLED DOWNSLOPE OF AREAS WITH MINIMAL GRADES TO FILTER SEDIMENT-LADEN RUNOFF FROM SHEET FLOW AS INDICATED ON THE SITE PLAN.

MAINTENANCE PROGRAM

DAILY SITE INSPECTION WILL BE REQUIRED AND DAMAGED CONTROLS REPAIRED BY CLOSE OF THAT DAY. INSPECTIONS SHALL ALSO FOLLOW EACH SIGNIFICANT RAINFALL. IN PARTICULAR THE FOLLOWING SHALL BE INSPECTED:

THE SILT FENCE BARRIER WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION OF THE FABRIC. SEDIMENT SHALL BE REMOVED WHEN THE LEVEL OF SEDIMENT DEPOSITION REACHES HALFWAY TO THE TOP OF THE BARRIER.

INLET PROTECTION WILL BE CHECKED FOR DETERIORATION AND REPLACED AS NEEDED.

AS GRADING PROGRESSES, FIELD ADJUSTMENTS SHALL BE MADE TO PERIMETER CONTROLS TO ACCOMMODATE CHANGING DRAINAGE PATTERNS AND TO FACILITATE POSITIVE DRAINAGE TO SEDIMENT BASINS.

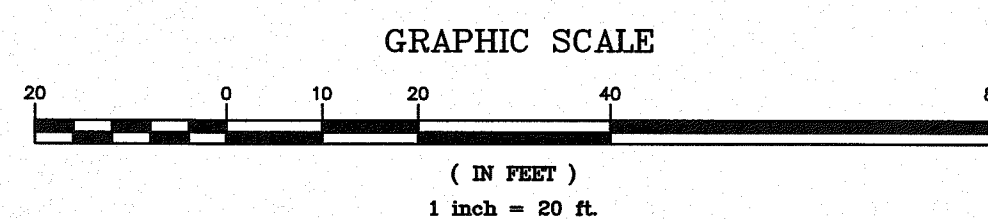
GIVEN SITE CONSTRAINTS AND THE INABILITY TO INCORPORATE A FULL CONSTRUCTION ENTRANCE, CARE MUST BE TAKEN TO PREVENT INCIDENTAL MUD FROM BEING TRACKED ONTO TOWN STREETS. CONTRACTOR TO ENSURE THAT ANY MUD TRACKED ONTO PUBLIC STREETS WILL BE IMMEDIATELY BROOMED/SHOVELED OR OTHERWISE REMOVED FROM THE ROAD SURFACE AT THE END OF EACH WORKING DAY, AND PRIOR TO ANY FORECAST PRECIPITATION.

FOR CONSTRUCTION SEQUENCING SEE SHEET 03

SEDIMENT AND EROSION CONTROL LEGEND			
NO.	TITLE	KEY	SYMBOL
3.05	SILT FENCE	SF	X-X-X
	SUPER SILT FENCE	SSF	XX-XX-XX
3.07	STORM DRAIN INLET PROTECTION	IP	(Symbol)
3.18	OUTLET PROTECTION	OP	(Symbol)
	FLOW ARROW DRAINAGE DIVIDE		(Symbol)

NOTE:
REFER TO E&S NARRATIVE AND VIRGINIA STATE EROSION & SEDIMENT CONTROL HANDBOOK FOR MORE INFORMATION.

THIS SHEET IS TO BE USED FOR
EROSION/SILTATION CONTROL
AND DRAINAGE DIVIDES ONLY !!!



ENGINEERING GROUPE PROJECT STATUS	
DATE	ACTION

EROSION AND SEDIMENT CONTROL PLAN
PHASE I & II, NOTES & DETAILS
RIVER PARK
RESTROOM & MAINTENANCE FACILITY
TOWN OF OCCOQUAN, VIRGINIA

COMMONWEALTH OF VIRGINIA
DENAR H. C. ANTELO
Lic. No. 38680
2-2-15
PROFESSIONAL ENGINEER

DATE: NOVEMBER 2014
SCALE: 1"=20'
DESIGNER: MAW
DRAFTSMAN: D.M.P.
FILE NO. SP-280
SHEET 09 OF 10

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